STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF COMMUNITY HEALTH

LEWIS CASS BUILDING

LANSING, MICHIGAN 48913

JAMES K. HAVEMAN, JR., Director

April 18, 2002

To All Interested Parties:

I am pleased to forward to you the 12-month assessment report of the ***Healthy Kids Dental*** program. This is the demonstration program contracted by the Department of Community Health (DCH) with Delta Dental Plan of Michigan to administer the Medicaid dental benefit to all Medicaid beneficiaries under age 21 residing in the original 22 selected counties. This report measures utilization of dental services, access to dental providers, the type of treatment received and expenditures for services delivered.

This project was initiated on May 1, 2000 in 22 counties to create access to oral health care for Medicaid beneficiaries by using Delta Dental's network of participating providers. This project hoped to alleviate the most common reasons that dentists cited for non-participation in Medicaid: low reimbursement rates and administrative burden. On October 1, 2000, the project was expanded to include an additional 15 counties. Currently the project is in 37 of the 83 Michigan counties.

This report effectively demonstrates that through this contract:

- Substantially more Medicaid beneficiaries are receiving dental care under ***Healthy Kids Dental*** compared to the traditional Fee-for-Service Medicaid coverage.
- More dentists are providing care to Medicaid beneficiaries under ***Healthy Kids Dental*** compared to the traditional Fee-for-Service Medicaid program.
- More Medicaid beneficiaries are receiving care within their county of residence rather than traveling long distances to receive care.
- More Medicaid beneficiaries are receiving restorative dental treatment compared to the traditional Fee-for-Service Medicaid program.

Access to oral health services has been a major priority for the DCH in the past few years and this report represents that commitment by the DCH to improve access to quality oral health care for Medicaid beneficiaries.

We plan to continue reviewing the utilization data, outcome measures and surveying the Medicaid beneficiaries on an annual basis.

Please direct any questions regarding ***Healthy Kids Dental*** to Christine Farrell at (517) 335-5129 or by email at farrellc@michigan.gov.

Cordially,

James K. Haveman, Jr.
Director

HEALTHY KIDS DENTAL DEMONSTRATION PROGRAM:

ASSESSMENT OF THE FIRST 12 MONTHS

Prepared for the
Michigan Department of Community Health

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EXECUTIVE SUMMARY

On May 1, 2000, the Michigan Department of Community Health initiated a demonstration project, called *Healthy Kids Dental*, for Medicaid-enrolled children in 22 counties. An additional 15 counties were added on October 1, 2000. Administered through Delta Dental of Michigan and using Delta-affiliated providers, *Healthy Kids Dental* addressed the most common reasons for dentists' non-participation in Medicaid: low reimbursement and complex administrative requirements.

The Child Health Evaluation and Research (CHEAR) Unit of the University of Michigan undertook an evaluation of the first 12 months of the *Healthy Kids Dental* program. The goal was to compare *Healthy Kids Dental* to the previous year's Medicaid program, and to private Delta plans, in the same 37 counties in terms of access to care, treatment patterns, and cost.

Major results of the evaluation demonstrated the following:

1) Substantially more Medicaid-enrolled children are receiving dental care under *Healthy Kids Dental,* compared with care under traditional Medicaid coverage, but not yet at the same rate as children with private Delta coverage.

2) More dentists in the 37 counties are providing care to Medicaid-enrolled children under *Healthy Kids Dental*, and more children are receiving dental care within their county of residence.

3) Under *Healthy Kids Dental*, Medicaid-enrolled children are receiving needed restorative and reparative dental care, and are more likely to begin a pattern of regular recall for routine preventive care, compared with Medicaid-enrolled children the previous year.

4) The higher costs per user and per enrollee for *Healthy Kids Dental* are due largely to the increased reimbursement rate and, to a lesser extent, to more children receiving more complete care. As the backlog of need in current patients is eliminated, cost per user per year is likely to decline.

The conclusion of the study is that the *Healthy Kids Dental* demonstration program has shown that substantial improvements can be made in access to dental care for the Medicaid-enrolled population.

BACKGROUND

Data from many sources demonstrate that children enrolled in Medicaid have lower utilization of dental services, poorer oral health status, and more untreated oral disease, as compared to privately insured children.[1-8] These disparities have been linked to the low proportion of dental providers who accept Medicaid as a payment source, leaving Medicaid enrollees with limited access to dental care. Consistently, dental providers have given three reasons for their lack of participation in Medicaid dental programs:

1) Medicaid reimbursement levels that are far below dentists' usual and customary fees[9];
2) administrative difficulties (e.g., eligibility verification, pre-authorization); and
3) excess number of broken appointments and other patient behaviors.[10-14]

The small numbers of private dental practitioners who are willing to treat Medicaid-enrolled children create a reduced access to dental care for Medicaid enrollees. National figures show that only 20- 30 percent of Medicaid-enrolled children receive any dental care in a given year,[9] contributing to what the Surgeon General called a "silent epidemic" of oral disease among US children from low-income families.[1]

Historically, Michigan has experienced these same problems with dental care for Medicaid enrollees. However, a turning point occurred when state officials established MIChild, the State Children's Health Insurance Program (SCHIP). The MIChild dental component was unusual in that was designed to be administered privately through an existing dental carrier, offering reimbursement levels identical to those paid for private dental insurance plans. Implemented on May 1, 1998, MIChild demonstrated the potential effectiveness of a this type of state-private dental partnership: in the first year, the proportion of MIChild enrollees with at least one dental visit was nearly identical to the proportion of privately insured children with at least one dental visit.

Following the initial success of the MIChild dental program, the Michigan Department of Community Health initiated a demonstration project, called *Healthy Kids Dental*, for its Medicaid population. Administered through Delta Dental of Michigan and using Delta-affiliated providers, *Healthy Kids Dental* aims to address—and ameliorate—two of the three commonly cited reasons for dentists' non-participation in Medicaid. First, reimbursement levels are identical to Delta's commercial dental plans. Second, administrative processes for *Healthy Kids Dental*–including verification of enrollment—are handled through Delta in the same manner as with commercial Delta plans.

On May 1, 2000, all Medicaid-enrolled children residing in 22 Michigan counties were switched to *Healthy Kids Dental.* An additional 15 counties were added to the demonstration program on October 1, 2000. *Healthy Kids Dental* participants can receive care anywhere in the state: eligibility is based on the child's county of residence, not the location of the dentist.

PURPOSE

The purpose of this study, conducted by the Child Health Evaluation and Research (CHEAR) Unit of the University of Michigan, is to evaluate the first 12 months of the *Healthy Kids Dental* program in terms of access to care, treatment patterns, and cost. Comparisons are made with data from the previous year's Medicaid program, and from the commercial plans administered by Delta Dental Plan of Michigan, in the demonstration counties.

The proportion of children receiving treatment during a given month is an indication of ease of access. Table 1 compares the average proportion of children residing in the 37 counties who received treatment each month for the three groups of interest:

- the previous year's Medicaid program(May 1999 - April 2000),
- *Healthy Kids Dental* (May 2000 - April 2001), and
- Delta private (May 2000 - April 2001).

The 43% increase from Medicaid to *Healthy Kids Dental* in the proportion of enrolled children who received care is considerable, but still not up to the level of the children with private Delta coverage. Part of the reason for the higher utilization among the privately-insured children is undoubtedly that these children are long-term dental patients and are on a regular recall schedule for routine dental check-ups.

Table 1. Average Monthly Proportion of Children with Any Dental Utilization 37 *Healthy Kids Dental* Counties

Type of Coverage	Average Monthly Proportion
Medicaid (99-00)	4.4%
Healthy Kids Dental (00-01)	6.3%
Delta private (00-01)	10.3%

Limiting the analysis to the original 22 *Healthy Kids Dental* counties allows for additional comparisons. From May 1999 – April 2000, a total of 16,395 Medicaid-enrolled children residing in the 22 counties had ≥1 dental visit(s). For the same months in 2000-01, there were 21,582 children in the *Healthy Kids Dental* program with ≥1 dental visit(s). This represents a 32% increase in the absolute number of children receiving dental care

Utilization is likely to vary by the length of time a child has insurance coverage for dental care. Table 2 presents utilization in the 22 counties original *Healthy Kids Dental* counties, comparing children who had 12 months of eligibility with those who had enrollment of 1-11 months. As shown, among both groups of Medicaid enrollees, utilization for continuously-enrolled children was higher than for children with more limited enrollment; however, the rates under Healthy Kids Dental showed significant improvement over the previous year. Rates for children covered by private Delta plans were higher overall, with little variation by length of enrollment; this is due to the fact that most children covered by a private Delta plan have continuous enrollment.

Table 2. Dental Utilization over 12 months, by Enrollment Duration 22 Original *Healthy Kids Dental* Counties

Enrollment Duration	Medicaid (99-00)	*Healthy Kids Dental* (00-01)	Delta Private (00-01)
Continuous (12 months)	32%	44%	68%
Any (1–11 month)	21%	26%	65%

RESULTS

Number of Enrolled Children

The initial implementation of *Healthy Kids Dental* included approximately 55,000 Medicaid-enrolled children (aged 0-20) in 22 counties. The addition of 15 more counties brought approximately 45,000 more children into the demonstration program, for a total number of approximately 100,000. This number is equivalent to the number of Medicaid-enrolled children in these same 37 counties during the year prior to *Healthy Kids Dental.*

NOTE: Data from 12 months were available for the original 22 demonstration counties, compared to only 7 months for the 15 counties added later. Therefore, this report reflects 22 or 37 counties, based on the availability and reliability of data for each question.

Access to Care

Figure 1 compares the number of (unduplicated) children receiving treatment during each month in the 37 counties, showing the comparison between the previous year's Medicaid program (May 1999 - April 2000) and the *Healthy Kids Dental* demonstration program (May 2000 - April 2001). These data demonstrate that the number of children who were "in treatment" (i.e., received any dental service) increased substantially each month as the demonstration program was implemented. The exception was December 2000. In general, December is a relatively short month for most dental practices, regardless of payment source, due to holiday closures. December 2000 was an unusually stormy month in Michigan, which also affected dental visits.

Figure 1. Comparison of Utilization between *Healthy Kids Dental* (May 2000 - April 2001) and the Previous Year's Medicaid Program (May 1999 - April 2000)

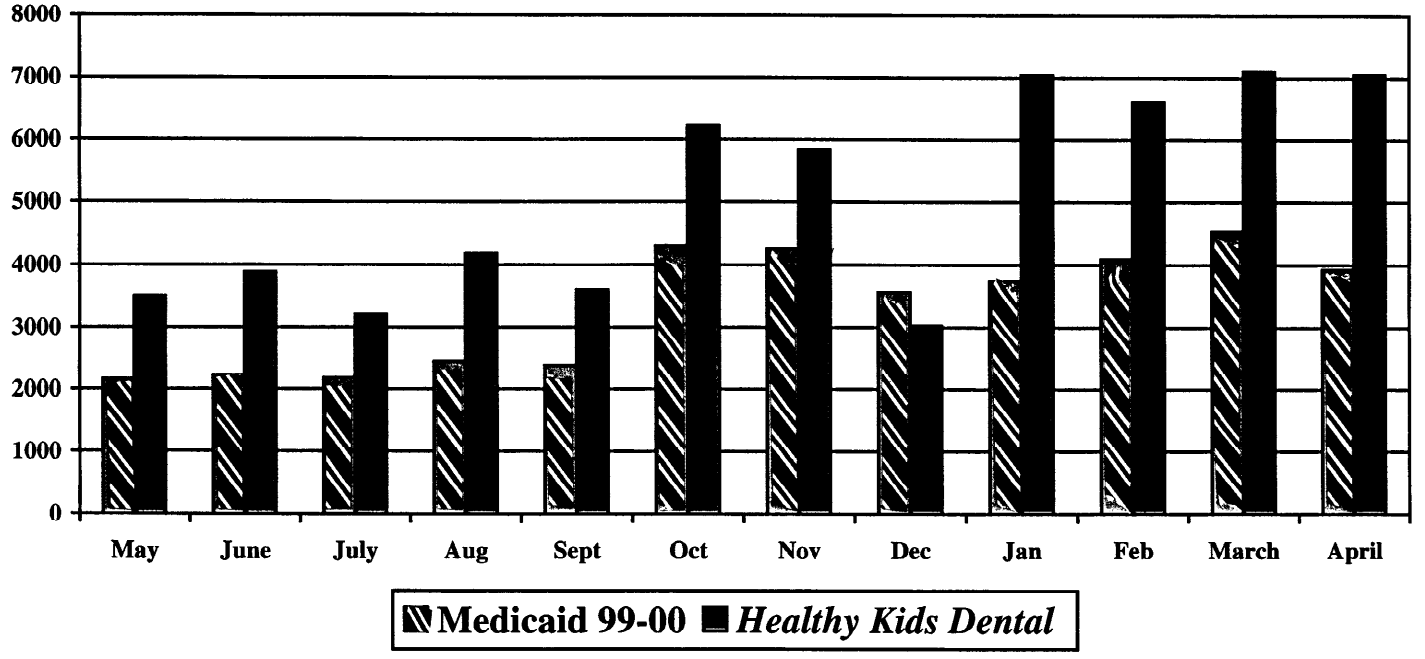
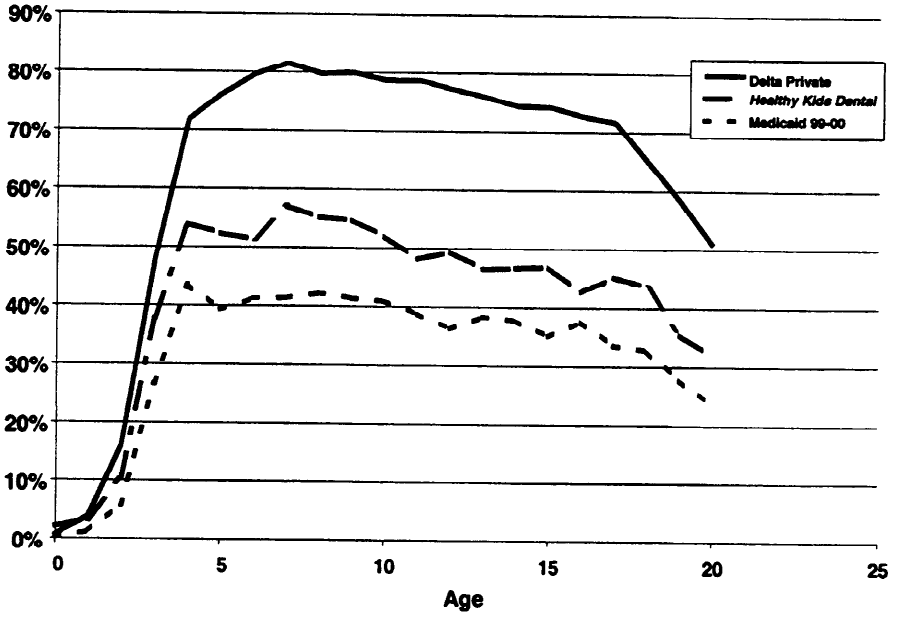


Figure 2 shows that for children who have continuous enrollment, the increase in utilization observed with *Healthy Kids Dental* is evident across all ages. Utilization for children 4-10 years old was more than 50%. Further, the relative increases in utilization in children under age 4 are quite large, with the level of utilization in the youngest children approaching that of their counterparts with private Delta coverage.

Figure 2. Percent Utilization by Age, Continuously-Enrolled Children, 22 Counties



Provider Participation and Location of Care

Healthy Kids Dental has been successful in encouraging broader participation in Medicaid by dental providers (Table 3). Indeed, some *out-of-county* dentists who had previously treated Medicaid-enrolled children did not do so under *Healthy Kids Dental*, apparently because those children were able to receive care closer to home. Especially encouraging are the results for the 18 Premier counties, in which *Healthy Kids Dental* children should be able to receive care from any Delta participating dentist, as opposed to the four DeltaPreferred Option counties, where only Delta DPO dentists are available. In the Premier counties, the number of dentists treating Medicaid children increased by more than 300%, and approached the number of who treated any children with Delta private insurance.

Table 3. Unduplicated Count of Children's Dental Providers over a 12-Month Period

Type of Coverage	Total Providers, Orig. 22 counties	In-County Providers Orig. 22 counties	In-County Providers, 18 Premier counties
Medicaid (99-00)	769	115	77
Healthy Kids Dental	952	351	247
Delta private (00-01)	3,666	550	289

For the 1,169 dental providers with any participation in *Healthy Kids Dental* during the first 12 months of the program, the number of *Healthy Kids Dental* children seen per provider is shown in Table 4. As of April 2001, one third of providers were seeing only 1 or 2 *Healthy Kids Dental* patients, while another third of providers were seeing more than 16 patients.

Trends related to the distribution of *Healthy Kids Dental* patients among participating providers will be monitored closely in the future, as this is an important aspect of the demonstration project's long-term sustainability.

Table 4. Number of *Healthy Kids Dental* Patients per Participating Provider 37 Counties, May 2000 – April 2001

# of *HKD* Patients	Distribution among Providers	
	N	%
1	274	23%
2	124	11%
3-5	156	13%
6-15	182	16%
16-30	129	11%
More than 30	304	26%

Another important trend, shown in Table 5, is the change in the location of dental care. In the original 22 counties, over the initial 12-month *Healthy Kids Dental* period, the proportion of Medicaid-enrolled children who received dental care in their county of residence was nearly double the rate of the previous year. Amazingly, the proportion of *Healthy Kids Dental* recipients treated in-county was higher than the comparable proportion of children with Delta private insurance.

Table 5. Total Number of Children Treated Over a 12-Month Period Original 22 *Healthy Kids Dental* Counties Only

Type of Coverage	Total treated in-county	
	N	(%)
Medicaid (99-00)	6,216	37.9%
Healthy Kids Dental (00-01)	15,814	73.3%
Delta private (00-01)	41,592	63.0%

Table 6 demonstrates another effect of the increase in local dental providers. By calculating the distance between zip code centroids of each patient and dentist, [15] we estimated the average travel distance for children in the 22 counties who received any dental care over the 12-month period. Under *Healthy Kids Dental*, the average travel distance was cut in half, to a distance identical to that traveled by children with Delta private insurance.

Table 6. Average Travel Distance for Dental Visits

Type of Coverage	Travel Distance (in miles), One-Way
Medicaid (99-00)	24.5
Healthy Kids Dental (00-01)	12.1
Delta private (00-01)	12.2

Treatment Patterns

Table 7 is evidence of the substantial need for restorations (fillings) and pulp treatments (an indication of decay that has gone untreated for a long period of time and has damaged the tooth pulp) among Medicaid-enrolled children. Procedure rates for restorations and pulp treatments are slightly higher for *Healthy Kids Dental* than for the previous year's Medicaid program, and substantially higher than rates for children with private Delta coverage.

Table 7. Selected Procedures per User over a 12-Month Period Original 22 Counties Only

Type of Coverage	Restorations	Pulp treatments	Extractions*
Medicaid (99-00)	1.32	0.064	0.24
Healthy Kids Dental (00-01)	1.52	0.083	0.25
Delta private (00-01)	0.76	0.023	0.16

*Comparison of extractions is limited to age 10 and under, to avoid confounding by extractions for orthodontic treatment and third molar removal which are both common among the Delta privately-insured children.

This pattern of more need for restorative care in the Medicaid population is entirely expected. The nature of dental decay is that in its more advanced stages it does not heal itself, and will almost always continue to progress and lead to an abscess if not treated. Therefore, in children who go for long periods of time without dental care, it is to be expected that when these children finally do get access to care, they will require more treatment and more expensive treatment of this type. This appears to be exactly what is happening. As Medicaid-enrolled children have their accumulated backlog treated and they become regular dental patients, they can be expected to require much lower levels of restorative and reparative treatment in future. In the future, annual treatment needs for *Healthy Kids D*ental children are expected to be much more like the patterns observed in the Delta privately group.

Payments per User by Procedure Type

A more detailed look at treatment mix is reflected by payments per user, or the average payment of all children with ≥1 dental visit in the 12-month period. Table 8 presents average payment per user.

Table 8. Average Per-User Expenditures by Major Procedure Groupings

Treatment type	Medicaid (99-00)	*Healthy Kids Dental* (00-01)	Delta Private (00-01)
Diagnostic / preventive	$66.11	$121.19	$119.48
Restorative	$58.42	$106.23	$41.11*
Endodontics	$7.81	$18.16	$4.76*
Surgery	$9.55	$30.26	$32.80*
Total	$147.82	$281.74	$205.75

*Does not include out-of-pocket costs for patient copayments, which are typically required by Delta.

The substantially higher per-user average payments for the *Healthy Kids Dental* population, compared with the previous year's Medicaid program, are due to higher reimbursement levels and more complete treatment provided under *Healthy Kids Dental.*

Comparisons between *Healthy Kids Dental* and Delta private mirror earlier utilization findings. For example, the average per-user restorative expenditure for *Healthy Kids Dental* is 2.5 times that for Delta private; for endodontic procedures, average per-user expenditure is 3.5 times higher. These higher per-user expenditures reflect the increased need for restorations and pulp-related procedures among the *Healthy Kids Dental* population. In addition, almost all private Delta plans require a co-payment for these types of services, which further increases the differential between these two groups. Conversely, the average per-user expenditure for diagnostic/preventive services is virtually identical between *Healthy Kids Dental* and Delta private, a reflection that (1) these need for these services is relatively constant for all children, and (2) the private Delta plans do not require any co-payment for these services.

These patterns indicate that dentists are treating the *Healthy Kids Dental* children in the same way as the privately-insured children in their practices, with the only meaningful difference being the accumulated problems related to decayed teeth in the *Healthy Kids Dental* children. While treatment of this backlog increases costs in the first year of the *Healthy Kids Dental* program, per-user payments for restorative and endodontic treatment should diminish for these children if they receive regular care in the future.

The relative distribution of expenditures among procedure groups, shown in Table 9 on the following page, demonstrates the similarities between *Healthy Kids Dental* and the previous year's Medicaid program. For both groups restorative and endodontic services make up nearly 45% of total expenditures—roughly twice that for the Delta private population. Again, this difference is attributable to greater backlog of need among Medicaid-enrolled children, while the vast majority of children with Delta private coverage are in a regular recall pattern and thus require little restorative care. The somewhat higher proportion of expenditures for extractions

in the Delta private group likely reflects the removal of third molars (wisdom teeth), which is quite common in these children.

Table 9. Relative Distribution of Payments by Major Procedure Groupings

Treatment type	Medicaid (99-00)	*Healthy Kids Dental* (00-01)	Delta Private (00-01)
Diagnostic / preventive	44.7%	43.0%	58.1%
Restorative	39.5%	37.7%	20.0%
Endodontics	5.3%	6.4%	2.3%
Surgery	6.5%	10.7%	15.9%

Components of Treatment Costs

Detailed information on the number of enrolled and users by month, paid amounts, payments per user, and payments per enrollee, is shown for Medicaid-enrolled children in the demonstration counties for traditional Medicaid (Table 10a) and *Healthy Kids Dental* (Table 10b).

Table 10a. Medicaid Monthly Counts and Payments, May 1999 – April 2000

Month	May-99*	Jun-99*	Jul-99*	Aug-99*	Sep-99*	Oct-99**	Nov-99**	Dec-99**	Jan-00**	Feb-00**	Mar-00**	Apr-00**	12mon
#Enrolled	53180	53706	53735	53889	53938	87450	86946	86565	86409	86663	86399	85071	873951
#Users	2164	2233	2186	2449	2384	4305	4258	3572	3743	4097	4531	3925	39847
Total Paid	$176,183	$200,275	$180,814	$200,494	$194,721	$356,895	$338,274	$283,397	$321,840	$361,225	$404,669	$357,707	$3,376,494
$/user	$81.42	$89.69	$82.71	$81.87	$81.68	$82.90	$79.44	$79.34	$85.98	$88.17	$89.31	$91.14	$84.74
$/enrolled	$3.31	$3.73	$3.36	$3.72	$3.61	$4.08	$3.89	$3.27	$3.72	$4.17	$4.68	$4.20	**$3.86**

Table 10b. *Healthy Kids Dental* Monthly Counts and Payments, May 2000 – April 2001

Month	May-00*	Jun-00*	Jul-00*	Aug-00*	Sep-00*	Oct-00**	Nov-00**	Dec-00**	Jan-01**	Feb-01**	Mar-01**	Apr-01**	12mon
#Enrolled	57071	59278	60071	56180	56625	96004	96746	97857	98646	100585	101792	103644	984499
#Users	3513	3887	3219	4184	3607	6214	5841	3035	7044	6605	7103	7054	61306
Total Paid	$504,922	$584,453	$459,734	$614,206	$525,861	$949,442	$891,893	$447,396	$1,112,460	$988,348	$1,146,087	$1,088,673	$9,313,475
$/user	$143.73	$150.36	$142.82	$146.80	$145.79	$152.79	$152.70	$147.41	$157.93	$149.64	$161.35	$154.33	$151.92
$/enrolled	$8.85	$9.86	$7.65	$10.93	$9.29	$9.89	$9.22	$4.57	$11.28	$9.83	$11.26	$10.50	**$9.46**

* includes original 22 *HKD* counties

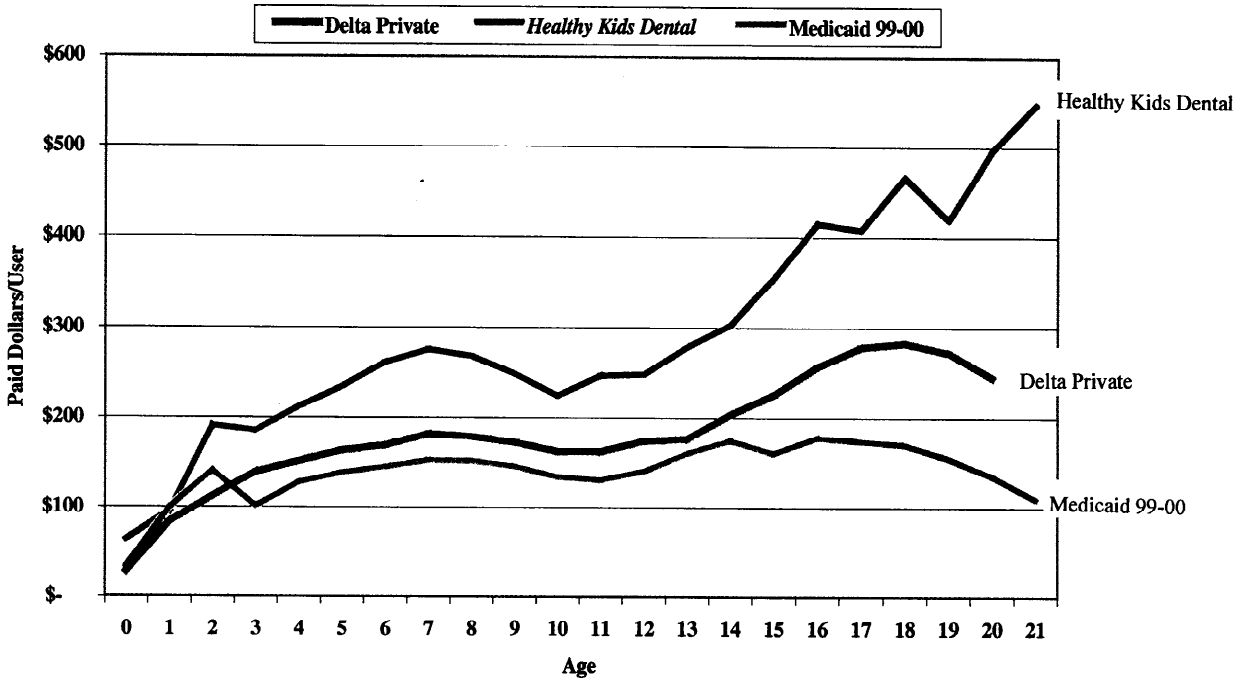
** includes all 37 *HKD* counties

With *Healthy Kids Dental*, payments per Medicaid-enrolled child per month increased from $3.86 to $9.46. This overall increase of $5.60 can be broken down into the following components: 71% ($3.97) due to higher reimbursement under *Healthy Kids Dental*;
23% ($1.29) to the increased number of users, and
6% ($0.33) to increases in services provided to users.

Similar calculations for the increase of $67.18 in average monthly payments per user, (from $84.74 under Medicaid to $151.92 under *Healthy Kids Dental)* show:
71% ($47.70) due to higher reimbursement under *Healthy Kids Dental*;
23% ($15.45) to the increased number of users, and
6% ($4.03) to increases in services provided to users.

Figure 3 shows the cost per user by age. While the same relative pattern between the three groups holds, it becomes clear that that the highest per-user costs are in the teenage patients. For the *Healthy Kids Dental* teenagers, this steep increase is further evidence of the consequence of deferring needed dental care for long periods of time.

Figure 3. Paid Amounts per User, by Age



Recall Patterns

Although 12 months is a short time period over which to observe recall patterns, early assessments are highly encouraging. Table 11 shows that recall rates are increasing for *Healthy Kids Dental* over the previous year's Medicaid program, but are still substantially below the level of the Delta private population. It must be remembered that the overwhelming majority of children with private Delta coverage are long-term patients of these dental practices, while most of the *Healthy Kids Dental* children are just being phased into these practices. Therefore, many of them will not have been in the practice long enough for the required 6-month interval between check-ups to have elapsed. It appears likely that recall patterns for the *Healthy Kids Dental* children will become more like the patterns for privately-insured children. We will monitor this trend closely as more time passes.

Table 11. Children with Recall Appointment ≥180 Days after Initial Appointment

Type of Coverage	% with Recall Appt
Medicaid (99-00)	10.6%
Healthy Kids Dental (00-01)	16.5%
Delta private (00-01)	30.1%

SUMMARY

The major findings of this report, based on data from the first 12 months of the demonstration project, are that *Healthy Kids Dental* has had the following impact:

Increase in utilization of dental services:

- More children are being treated under *Healthy Kids Dental.*
- The most significant utilization increases are seen in children 4-10 years and children continuously enrolled for 12 months.

Increased dental provider participation in Medicaid:

- More dentists are providing care to Medicaid-enrolled children under *Healthy Kids Dental* (at least a 24% increase).
- More local dentists are providing care under *Healthy Kids Dental* (a 305% increase).
- 85% of the local dentists who treat children are treating *Healthy Kids Dental* children in Delta Premier counties.

More dental care provided locally:

- More children are treated in their home county (an increase from 38% to 73%).
- Travel distance per visit decreased from 24.4 miles to 12.1 miles.

Treatment of dental needs:

- The backlog of need is being treated (more restorative and pulp treatment care).
- More *Healthy Kids Dental* children are entering regular recall.

Cost patterns consistent with treatment needs:

- The care being provided, and its cost per user, is similar between privately-insured and the *Healthy Kids Dental* children, except for the additional restorative and pulp-related care.
- The cost differences are due largely to the differences between Medicaid fees and the *Healthy Kids Dental* fees, and to more children receiving more complete care.
- As the backlog of need in current patients is eliminated, cost per user per year is likely to decline.

CONCLUSION

By eliminating two of the three identified barriers to provider participation (low fees and administrative complexity), the *Healthy Kids Dental* demonstration program has shown that substantial improvements can be made in access to dental care for the Medicaid-enrolled population.

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